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[54]发明名称 城市立体交通系统

[57]摘要

城市立体交通系统发明阐明了一种现代化城市道路系统,能够解决现代化城市对交通的要求,并能节约大量用于立交桥、信号系统及占地面积等的资金,它主要是由单行原理,和单行环绕跨越、转向原理设计而成,是解决新市区交通建设,老市区改造,城镇升建城市的极有效的,且唯一的现代化方法。

权 利 要 求 书

1. 城市立体交通系统是城市综合交通最现代化的方式, 本发明的特征是:

a 所有道路形成网格状系统, 最好是正交, 也可是非正交, 将市区分成许多块, 或许多小区、厂区,

b 所有形成网格的道路全部是单行道,

c 同顺向单行道设计的基本原则是正行道间是一条反行道, 交替安排,

d 交叉向单行道相互间的设计原则是某一方向的单行道由单层立交桥全部架起, 形成高一层的立交系统, 或跨越部分架起, 形成波浪起伏状,

e 所有道路全部封闭, 人行道、人力车、自行车、畜力车可在单行道侧另开通行道(并可同高架道并行, 以跨越地面一层单行道, 也可下挖一层), 可在高架单行道下或小区道路上通行,

f 铁道或有轨电车原则上与地面一层同方向的单行道同向, 并紧靠在一起(留出安全部隔, 或以小区和人行道分开),

g 相互交叉的单行道间, 以半弧形立交引桥相联, 用于车辆转向, 汇流及分流,

h 单行道上一般设三个行车道, 一个是左转弯车道, 中间一个超车道, 一个是右转弯车道,

i 城市立体交通系统的道路上, 一般不设信号, 且全时间畅通,

j 公交车停车站设在封闭围栏侧, 围栏开人行口, 以供上下车, 公交车停在车站前增加的停车道上。

2. 根据权力要求1, 其特征是穿越城市的公路可采用单行道中设定固定的道路为穿越城市的高速公路, 或建造环需高速公路或二者结合, 并采用全封闭或半封闭(与城市内行驶车辆共用)的形式。

城市立体交通系统

本发明是关于城市交通的立体建设系统工程，特别适用于新建城市和城镇升级为城市，或老市区改造工程。

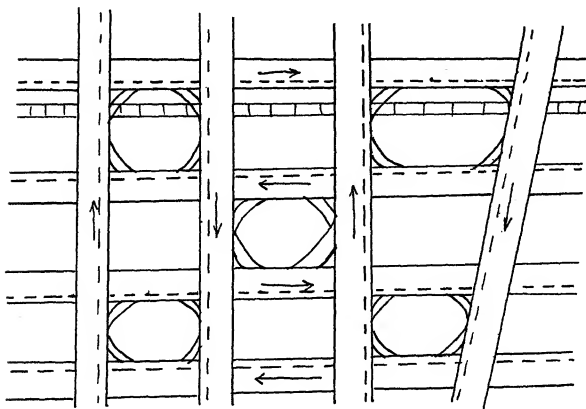
现有的城市交通系统是非常陈旧的机动车，市区内电铁及铁路（包括有轨和无轨，部分城市有铁路交通）及人力、畜力车的混合交通道路系统。由于混合使用和对行道，造成交通、人员、车辆混乱，相互干扰，且目前建造的立交桥也非常庞大，耗资巨大，所取得的效果有限，给经济发展造成巨大的阻碍。又因汽车穿越城市，要从市区内通过，由于塞车，使车辆长期处于起动慢行状态中，车辆磨损、耗油非常大，弊端十分突出。

本发明解决了上述各项问题，可以使交通现代化，促进经济发展。

本发明是这样实现的，由交叉的网络（全部由单行道组成）将市区分成许多块，或称小区、厂区，交叉的方式最好是正交，也可根据实际情况而非正交，参照说明书附图，同顺向道路原则上是正行道间有一条反行道，交替安排，相互交叉的道路，某一方向的单行道全部架起一层，或跨越部分架起，形成波浪起伏状，所有道路全部封闭，人行道、人力车、自行车、畜力车道可在单行道某侧而另开通行道，并与机动车道分隔开，开辟的道路也可同高架道并行，以跨越地面一层的与之交叉的单行道，或下挖一层穿越地面一层的与之交叉的单行道。当不穿越单行道时，上述三种车或机动车可在小区内的道路按现行交通规则行驶。一般情况下，铁路、有轨电车应与地面平齐的单行道并行，以避免起伏，并可并排放在一起，以方便设置和节约立交桥的跨度。相互交叉的单行道间，以半弧形立

交引桥相联用于车辆的转向、汇流、分流。单行道上一般设三个行车道，一是左转行车道，中间是超车道，一是右转行车道。这样设置的立体交通系统，一般无须设置信号系统，可全时间畅通。公交车辆也可在单行道上行駛，并在封闭栏侧开上下车人行口，公交车可靠边停靠在车站前增加的行车道上。由此而设立的立体交通系统，了也特别方便穿越城市的汽车，其中之定二可供其行駛，由于封闭可使行车速度大大提高，除此之外，也可设立环城高速公路单独使用，或与之配合使用。

说明书附图



THE TRIDIMENSIONAL TRAFFIC SYSTEM IN CITY

This invention is about engineering of tridimensional construction systems of urban traffics, especially be suitable for a new city's construction and for a town's upgrade to a city, or for an old urban district's improvement projects.

Existing urban traffic system is very old, blended road system, which is used by railroad cars, railways (include rails or not, and some cities have rail traffic), jinrikishas and animal power vehicles together. It made confusion and mutual interference among transportation, people and vehicles, owing to blended and both direction together traffic, and at the same time, the overpass bridges currently are very huge and costly, but their effect are very limited, and give huge encumbrance to the economic development, and also because the automobiles need to penetrate the urban district of the city, owing to traffic jams, the automobiles are situated in the state of start and crawl in a long term, so the vehicles' abrasion and gas consumption are both very high, the shortcomings are so obvious.

This invention solves the problems above, and could make the transportation modern, and promote the development of the economy.

This invention is actualized like that, the urban districts are divide into pieces or called inhabited areas and plant areas by crossed network (all are formed by one-way roads), the mode of the cross had best be perpendicular, but also could be not according to practical situations, refer to the figures of the specification, roads with the same direction is designed in the way that, there is a inverted road between every two positive ones, designed alternately, the roads crossed with each other, all the one-way roads in one direction are set up with overpass bridges, or only set up the spanned parts, formed wavilness, all the roads are sealed, it could build roads for people, jinrikshas, bicycles and animal power vehicles beside the one-way roads, at the same time divided with the vehicles roads, those roads build beside the one-way roads could paralleled with the overhead ones to span the one-way roads on ground

which crossed with them, or could also be digged into the underground to span the one-way roads on ground which crossed with them. The autocars or the three kinds of vehicles forementioned, when they do not traverse the one-way roads, could ran on the roads in the inhabited areas under current traffic regulations. Under the general situation, railways, railroad cars should parallel with the one-way roads on ground, in order to avoid wavilness, at the same time side by side with each other, in order to build easily and make the span of the overpass bridge is not too long. The one-way roads crossed with each other are connected with half arcking bridge approaches of cloverleaf junction, for vehicles' turning, confluence and difffluence. Generally there is three driveways in the one-way roads, one for left-turning traffic, one for right-turning traffic, and the one between them is for overtake vehicles. The tridimensional traffic system built in this way, generally need no traffic signal system, but could be expedite all the time. Buses could also run on the one-way roads, at the same time could build ostium on the sealed fence for people get up and down the buses, buses could stop on the roadways added in front of the station. Tridimensional traffic system build like that is also very convenient for automobiles to traverse a city, the second project could supply roads for this purpose, thanks to the seal, the running speed of these automobiles could be advance hugely, in addition , it could also build speedways looped the city for these automobiles solely, or used together with the second project.

Claims

1. The tridimensional traffic system in city is the most modern mode in a city's synthetical traffic system, this invention's characters are:

- a、 All the roads are netty system, it is preferred if they are perpendicular with each other, the urban district was divide into many piecese or subzones and plant sides.
- b、 All the netty roads are one-way traffic, or unperpendicular ones,
- c、 The fundamentals in design the one-way traffic in the same direction is that, there is a inversed road between every two positive ones.
- d、 The principle of the designing of those crossed one-way roads is that, all the one-way roads in the same direction are set up with monolayer overpass bridges, formed the over crossed system, or only set up the crossover parts, formed wailiness.
- e、 All the roads are sealed, it could build road(at the same time it could paralleled with the overhead ones to span the one-way roads on ground or also could be digged into the underground) beside the one-way roads for people, jinrikshas, bicycles and animal power vehicles , then they could run on the roads below the over one-way roads or in the inhabited areas.
- f、 In principle, railroads and tram's orbits are paralleled with the one-way roads on the ground which are stretched in the same direction, cling together with each other and at the same time been divided with secure space ,or divide with inhabited areas and pavements.
- g、 The one-way roads crossed with each other are connected with half arcking bridge approachs of cloverleaf junction, for vehicle's turning, confluence and diffluence.
- h、 Generally , there are three driveways on the one-way roads, one for left-turning traffic, one for right-turning traffic, and the one between them is for overtake vehicles.
- i、 There is generally no traffic lights on the roads of tridimensional traffic system in city, but expedite all the time.
- j、 The station for buses is built beside the sealed fence, there are plackets on

the fence for people to get up and down buses, these buses stop on the stopways in front the station.

2. Based on claim1, its characteristics are that: the highways which traverse the city could be set as fixed roads which penetrated the city or be set as looped ones circled the city, or both of the methods are used, and at the same time adopt complete shut-off or hemi shut-off(which is shared with vehicles in the city) modes.

Abstract

The present invention relates to an urban stereo-traffic system, expounding a modern urban road system, and can solve the requirements for modern city on traffic, and can greatly economize the investments used building grade separation viaduct and signal system and occupation area. Said system is designed by using one-way traffic principle, one-way ring road and overcrossing and turning principle, so that it is an effective and unique modernization method for solving new urban traffic construction, old urban renewal and changing town into city.